



Sheet 1 of 3

U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

00-713424

Patent No.

09/976,617

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several sheets if necessary)

Applicant:

Chad A. Mirkin, et al.

Filing Date:

October 12, 2001

Group

1637

## U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
<i>M</i>	1.	5,830,986	11/03/98	Merrill, et al.	528	332	10/28/96
	2.	5,900,481	05/04/99	Lough, et al.	536	55.3	11/06/96
	3.	6,203,989	03/20/01	Goldberg, et al.	435	6	03/25/99
	4.	6,251,303	06/26/01	Bawendi, et al.	252	301.4R	09/18/98
	5.	6,277,489	08/21/01	Abbott, et al.	428	403	12/04/98
	6.	6,306,610	10/23/01	Bawendi, et al.	435	7.1	09/17/99
	7.	6,361,944	03/26/02	Mirkin, et al.	435	6	06/25/99
	8.	6,365,418	04/02/02	Wagner, et al.	436	518	05/18/00
<i>M</i>	9.	6,417,340	07/09/02	Mirkin, et al.	536	23.1	10/20/00

## FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
<i>M</i>	10.	WO 93/25709	23 December 1993	PCT				
	11.	WO 98/04740	5 February 1998	PCT				
	12.	WO 98/17317	30 April 1998	PCT				
	13.	WO 99/60169	25 November 1999	PCT				
	14.	WO 00/33079	8 June 2002	PCT				
<i>M</i>	15.	WO 01/00876	4 January 2001	PCT				

EXAMINER

DATE CONSIDERED

10/29/03

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449  
(Rev. 2-32)U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

Serial No.

00-713-24

09/976,617

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several sheets if necessary)

Applicant:

Chad A. Mirkin, et al.

Filing Date:

October 12, 2001

Gross

1637

 RECEIVED  
 AUG 20 2003  
 TECH CENTER 1600-1600

## U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate

## FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Subclass	Translation Yes	No
u	16. WO 01/51665	19 July 2001	PCT				
	17. WO 01/73123	4 October 2001	PCT				
	18. WO 01/86301	15 November 2001	PCT				
	19. WO 02/04681	17 January 2002	PCT				
	20. WO 02/18643	7 March 2002	PCT				
	21. WO 02/36169	10 May 2002	PCT				
	22. WO 02/46483	13 June 2002	PCT				
u	23. WO 02/46472	13 June 2002	PCT				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

u	24.	Letsinger, R., et al., "Chemistry of Oligonucleotide-Gold Nanoparticle Conjugates," <i>Phosphorus, Sulfur and Silicon</i> , Volume 144, p. 359-362 (1999)
u	25.	Letsinger, R., et al., "Use of a Steroid Cyclic Disulfide Anchor in Constructing Gold Nanoparticle—Oligonucleotide Conjugates," <i>Bioconjugate Chem.</i> , p. 289-291 (2000)

EXAMINER

DATE CONSIDERED

10/24/03

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449  
(Rev. 2-32)U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

Serial No.

00-713424

09/976,617

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several sheets if necessary)

Applicant:

Chad A. Mirkin, et al.

Filing Date:

October 12, 2001

Group

1637

## U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate

## FOREIGN PATENT DOCUMENTS

Document Number	Date	Country	Class	Subclass	Translation Yes No

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

26.	Li Z., et al., "Multiple thiol-anchor capped DNA-gold nanoparticle conjugates," <i>Nucleic Acids Research</i> , Volume 30, p. 1558-1562 (2002)
27.	Nuzzo R., et al., "Spontaneously Organized Molecular Assemblies. 3. Preparation and Properties of Solution Adsorbed Monolayers of Organic Disulfides on Gold Surfaces," <i>J. Am Chem. Soc.</i> , Volume 109, p. 2358-2368 (1987)
28.	Otsuka, H., et al., "Quantitative and Reversible Lectin-Induced Association of Gold Nanoparticles Modified with D-Lactosyl-D-mercapto-poly(ethyleneglycol)," <i>J. Am Chem. Soc.</i> , Volume 123, p. 8226-8230 (2001)
29.	Wuelfing, P., et al., "Nanometer Gold Clusters Protected by Surface-Bound Monolayers of Thiolated Poly(ethylene glycol) Polymer Electrolyte," <i>J. Am Chem. Soc.</i> , Volume 120, p. 12696-12697 (1998)

EXAMINER

DATE CONSIDERED

10/29/03

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32) MAY 6 2003 U.S. PATENT & TRADEMARK OFFICE	U.S. Department of Commerce Patent and Trademark Office  <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)	Atty. Docket No.  00-713-124	Serial No.  09/976,617
<div style="text-align: center;"> <b>RECEIVED</b>            MAY 16 9 2003            TELECENTER 1600/2900         </div>		Applicant:  Chad A. Mirkin, et al.  Filing Date:                      Group: October 12, 2001                      1637	

## U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
Z	1.	4,996,143	02/26/91	Heller, et al.	435	6	04/13/90
	2.	5,508,164	04/16/96	Kausch, et al.	435	6	10/29/93
	3.	5,922,537	07/13/99	Ewart, et al.	435	6	11/8/96
	4.	5,972,615	10/26/99	An, et al.	435	6	01/21/98
	5.	6,264,825	07/24/01	Blackburn, et al.	205	777.5	05/23/99
	6.	6,214,560	04/10/01	Yguerabide, et al.	435	7.1	04/18/97

## FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
Z	7.	WO 94/29484	12/22/94	PCT				
	8.	WO 00/25136	05/04/00	PCT				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Z	9.	Mohanty J., et al. "Pulsed laser excitation of phosphate stabilized silver nanoparticles," <i>Proc. Indian Acad. Sci.</i> , Vol. 112, No. 1, p. 63-72.
	10.	Nicewarner- Peña S., et al., "Hybridization and Enzymatic Extension of Au Nanoparticle-Bound Oligonucleotides," <i>J. Am. Chem. Soc.</i> , Vol. 124, p. 7314-7323 (2002)
	11.	Whitesides G.M., et al., "Soft Lithography in Biology and Biochemistry," <i>Annu. Rev. Biomed. Eng.</i> , p. 335-373 (2001)

EXAMINER <i>Qu Li</i>	DATE CONSIDERED <i>10/29/03</i>
-----------------------	---------------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.